



THE TOWN OF CARCASSONNE, IN FRANCE.



CASTLE OF CARCASSONNE, LANGUEDOC.

CRUSADE AGAINST THE ALBIGENSES—CRUELITIES  
OF THE POPE'S LEGATE AT CARCASSONNE.

CARCASSONNE, or Carcassone, is a town in the south of France, situated in the department of Aude, and on the banks of the river which gives name to the department. It lies due south from Paris, at the distance of about 390 miles in a direct line, or nearly 500 by the road. It is a place of great antiquity, having existed before the campaigns of Cæsar, who speaks of it as one of the towns existing in *Gallia Ulterior*. It is mentioned more than once by the Roman writers of a later age. On the downfall of the empire it passed successively into the hands of the Visigoths, the Saracens, and the Franks; and under the rule of the last it was subject to counts of its own, who established themselves in this part of

France, and transmitted their authority to their heirs. It came into direct possession of the crown of France about the middle of the thirteenth century, being then ceded by its count to Louis the Ninth, or St. Louis, who reigned as king of France from 1226 to 1270.

Carcassonne stands on both banks of the river Aude, though the two parts into which the river divides it may be considered as almost perfectly distinct. On the right bank is the old town, or *cité*, half deserted; it is surrounded by walls, the appearance of which sufficiently denotes their antiquity, and composed of narrow, dirty streets. It contains a fine ruined castle and a cathedral; the latter was erected about the end of the eleventh century, and is a handsome building, containing some stained-glass windows, worthy of attention, and the tower of the

Simon de Monfort, of whose share in the crusade against the Albigenses we shall have occasion to speak hereafter. On the left bank of the river is the lower town, which is altogether modern, and built with straight streets, crossing at right angles. It has a *Grande Place*, planted with trees, surrounded by well-built houses, and decorated in the middle with an insignificant fountain, and the usual edifices found in a middle-sized French town. Some manufactures are carried on in the town; the chief of them is that of woollen cloth, which was established in the reign of Louis XI., and much encouraged by Colbert, the celebrated minister of Louis XIV.

In the approach to Carcassonne, the old town stands out conspicuous above the lower and more modern portion. "We saw it," says Mrs. Carey, "at some distance, apparently on a hill, with bastions, towers, and all the 'pomp and circumstance of war' around it; but on our near approach we found 'its occupation o'er;' for passing under its deserted walls, we crossed a bridge over the river Aude, and entered a very good town, with wide, handsome, clean streets."

Carcassonne is memorable in an historical point of view, for its share in the crusade, which was carried on in the early part of the thirteenth century, against the Albigenses, in the south of France, and of which, in former numbers, we have given an account up to the middle of the year 1209, when the massacre of Béziers took place. The terror which that event produced throughout the surrounding country, caused the other towns and strong places to be deserted; none appeared capable of withstanding an army which had taken and destroyed the capital, and the inhabitants preferred secreting themselves in the woods and mountains, to waiting within walls to be captured and put to death. Every knight in France then lived in a fortified dwelling, and the number of castles in the two dioceses of Béziers and Carcassonne was immense, but upwards of a hundred of them were found to be deserted on the advance of the Crusaders, who, after their successes at Béziers, had turned their arms towards Carcassonne, the other great city of Raymond Roger, the young Viscount of Alby, with whom they were at war, and that one in which he had himself taken up his abode on the first invasion of his territory.

The Crusaders advanced, "unsatiated with blood," and arrived on the 1st of August before Carcassonne, which then consisted entirely of the "old town," as it is now called, on the right bank of the Aude; its fortifications had been strengthened, and it was defended by a numerous and valiant garrison. On the following day, one of the two suburbs, which were also encircled with walls and ditches, was attacked, and taken after a severe fight of two hours' continuance; but the assault of the second immediately afterwards, was not so successful, the assailants being repulsed with loss. The besieged defended it for several days; they then evacuated it, after having set it on fire, and retired within the city.

King Peter the Second, of Aragon, whom the Viscount of Béziers had acknowledged as his lord, was grieved to behold the oppression of that prince, who was, moreover, his nephew. He came to the camp of the Crusaders, addressed himself to the Count of Toulouse, his brother-in-law, who was one of those lords compelled to follow and second the enemies of his country; and he offered himself as mediator between the legate and his partisans on one side, and the viscount on the other. Before they entered on any conditions, the abbot Arnold of Cîteaux, (the legate,) wishing to obtain some information as to the state of the besieged, engaged the King of Aragon to enter

the city, and confer with Raymond Roger. The monarch did so; Raymond Roger, after expressing his thanks, said,—

If you wish to arrange for me any adjustment, in the form and manner which shall appear to you fitting, I will accept and ratify it without any contradiction; for I see clearly, that we cannot maintain ourselves in this city, on account of the multitude of countrymen, women, and children, who have taken refuge here. We cannot reckon them, and they die every day in great numbers. But were there only myself and my people here, I swear to you, that I would rather die of famine, than surrender to the legate.

The legate, on his part, had no wish to see the town peaceably surrender; he had not dared to reject the offer of the King of Aragon to bring about an accommodation, "yet he wished not to have a peace which should suspend the massacres." He, therefore, took care that such proposals only should be made, as were sure to be rejected, and caused the viscount to be informed, that the only terms which could be granted him, were, that he might quit the city with twelve others, and that the remainder of the citizens and soldiers should be abandoned to his good pleasure. "Rather than do what the legate demands of me," replied Raymond Roger, "I would suffer myself to be flayed alive. He shall not have the least of my company at his mercy, for it is on my account they are in danger." Peter the Second approved the generosity of his nephew, and turning towards the knights and citizens of Carcassonne, to whom these conditions had been announced, he said to them, "You now know what you have to expect; mind and defend yourselves well, for he who defends himself, always finds good mercy at last."

As soon as the King of Aragon had taken his departure, the assault was commenced; the Crusaders sought to fill up the ditches that they might be enabled to scale the walls, and for that purpose brought up heaps of fagots, encouraging one another in the task with loud shouting. But as soon as they approached the walls, the besieged poured upon them streams of boiling water and oil, crushed them with stones and projectiles of every kind, and forced them to retire. The attack was prolonged, and many times renewed; and at last the assailants were obliged to retreat with great loss. The time was now approaching when the greater part of the Crusaders would have finished their forty days' service; "they had reckoned upon a miracle in their favour, and already had been repulsed in two assaults." The legate remarked in his army some symptoms of discouragement; he therefore employed a gentleman related to the viscount, who happened to be with him, to enter into the city and renew the negotiations. Raymond Roger, on his side, greatly desired an honourable capitulation, for he began to perceive the failure of water in the cisterns of the city, which the extreme heat of the season had tended to dry up. He was so fully satisfied of the rectitude of his proceedings, that he could not but believe, that when the injustice of which he had been the victim should be known, it would excite the commiseration of the great lords and the ecclesiastics, whom blind and bigoted zeal for the church had armed against him. He persuaded himself, that if he could gain a hearing, he should be able to remove all the difficulties which he had hitherto encountered; and he only asked the mediator who presented himself, to procure him a safe conduct, that he might repair to the camp of the Crusaders. He obtained, both from the legate and lords of the army, the most complete guarantee for his safety and liberty, and the promise of the Crusaders was confirmed by oaths. He then quitted the city, attended by three hundred knights, and pre-

sented himself at the tent of the legate, where all the principal lords of the army were assembled. After having nobly and powerfully defended his conduct, he declared that he submitted, as he had always done, to the orders of the church, and that he awaited the decision of the council.

But the legate, as Sismondi remarks, was profoundly penetrated with the maxim of Innocent the Third, that *to keep faith with those who have it not, is an offence against the faith*. He caused the young viscount to be arrested, with all the knights who had followed him, and confided him to the care of Simon de Montfort. He expected that by this act of severity he should strike terror into the people of Carcassonne; but the effect of his treachery was precisely to withdraw from his power the victims whom he had already destined to the flames. The inhabitants were acquainted with a secret passage by which they could escape from the town; it was a subterranean passage leading from Carcassonne to Cabardes. During the night they all escaped by this outlet, abandoning their town and all their wealth to the rapacity of their enemy. The next morning the besiegers were surprised at the bare appearance of the walls, and for some time could hardly be convinced that the town really was evacuated. They at length entered; the legate took possession of the spoil in the name of the church, excommunicating those of the Crusaders who should appropriate the smallest portion.

Nevertheless, (says Sismondi,) he thought himself obliged to dissemble the villany to which he had had recourse, and which had so badly succeeded. He announced, that on the 15th of August, the day of the occupation of the city, he had signed a capitulation, by which he permitted all the inhabitants to quit it with their lives only. He thought it also proper, for the honour of the holy church, not to let it be supposed that all the heretics had escaped him. His scouts had collected in the fields a certain number of prisoners, and amongst the fugitives from Carcassonne, some had been overtaken and brought to the camp. He had in hands, besides, the three hundred knights who had accompanied the viscount. Out of all these, he made choice for execution of four hundred and fifty men and women, who might be suspected of heresy. Four hundred he caused to be burned alive, and the remaining fifty to be hanged.

Upon the capture of Carcassonne, the principal object of the crusade had been accomplished. The Count of Toulouse had submitted; the Viscount of Béziers was a prisoner, and his two great cities had been nearly destroyed. The French lords, who, to gain the pardons of the church, had marched to the crusade, began to feel some shame for all the blood which had been shed, and for their word which had been falsified. The knights and soldiers, having fulfilled the term of their service, demanded their dismissal; but the Abbot of Cîteaux, the legate of the Pope, alone felt that he had not done enough.

The sectaries were frozen with terror; they had concealed themselves; they were silent; they would even be so, long after the departure of the Crusaders. But they were not destroyed; their opinions would secretly circulate; resentment for the outrages already suffered, would alienate them still more from the church, and the reformation would break forth afresh. To turn back the march of civilization, to obliterate the traces of a mighty progress of the human mind, it was not sufficient to sacrifice, for an example, some thousands of victims: the nation must be destroyed; all who had participated in the development of thought and of science must perish, and none must be spared but the lowest rustics, whose intelligence is scarcely superior to the beasts whose labours they share. Such was the object of the Abbot Arnold, and he did not deceive himself as to the means of accomplishing it.

How well he succeeded in effecting the diabolical object, and of his means for that purpose, we shall speak on future occasions.

## POPULAR ILLUSTRATIONS OF LIFE ASSURANCE.

### No. IV.

IN our last paper, we endeavoured to explain, by easy and familiar examples, the manner in which the value of an Assurance for a single year was deduced from the tables of mortality; and we promised to resume our investigation of the subject with an inquiry into the method employed by Societies, in determining the values of these contracts, when the risk of Assurance is extended during the whole period of life. Assurance Societies, in their simplest and original form, differ very little (excepting in their magnitude) from the Friendly and Benevolent Societies of the working classes\*; both are supported by the mutual contributions of their members, and both engage to provide for certain future exigences, out of a species of friendly fund, to which the longest lives contribute most largely, but from which all parties derive a like advantage; viz., security for the payment of the sum assured.

In some cases, where the admission of a member is shortly followed by his death, his representatives will be considerable gainers from the fund, by the sudden conversion of the contribution of the deceased into the amount assured. But if, on the other hand, he lives to be the last, or one of the last survivors of his class, he will in proportion be as much a loser by the fund, as the early claimant would have been a gainer. The surplus of the interest (above his actual claim) accumulated by the long outstanding of his contribution, having been gradually absorbed in supplying the deficiencies of former members, whose premature deaths had prevented their contributions accumulating to the sums assured. According to the Northampton Table of observations, the age of ninety-six is the extremity of life, and 1*l*. in present money would purchase by this table to a person aged thirty, the Assurance of 2*l*. 1*s*. 10*d*. upon death. Supposing, therefore, the death of this individual to happen in the same year in which he enters, or becomes a member, he would at once have more than doubled his original contribution. But if, on the contrary, he were certain of existing, and did, in fact, exist to the age of ninety-six, or in other words became the last survivor of his class, the same 1*l*., if laid up at 3 per cent., compound interest, instead of being invested in a Life Assurance, would have accumulated, during the sixty-six remaining years of his existence, to no less a sum than 7*l*. 0*s*. 8*d*. The difference, therefore, between the claim to which he will be entitled under his policy, and the sum to which his contribution would have amounted, had he chosen to have become his own assurer, will have gone towards defraying the deficiencies of the earlier claimants.

But it is with a view of guarding against the proverbial uncertainty of life, and to assure to all parties a reasonable increase of their various contributions, that Assurance Societies were originally instituted. This is done by taking a certain average, or mean, (properly graduated) between the original contribution as the lowest, and the highest increase which such contribution can possibly receive. The value of an Assurance, therefore, at any given age, or the

\* The business of a Friendly or Benefit Society, when conducted upon an extended scale, and based upon scientific principles, is far more complicated than that of an Assurance Society. Friendly Societies, indeed, embrace a variety of objects, such as weekly provision for old age, allowances during sickness and incapacity for labour, death-pay, and funeral-money, none of which, with the exception of the two last, (which are modifications of Life Assurance,) are in any way connected with the business of ordinary Life Societies.



single premium\* charged by a Society for the purchase of a reversion, will be such an amount in present money, as being multiplied by the number of members existing in the society at the given age, will provide a fund sufficient to discharge the sum assured at the death of each member, at the end of every year in which the lives successively become extinct, upon the hypothesis that the number of annual deaths in the Society will exactly coincide with the mortality of the Table of Probabilities employed. But if, for a long continuance of years, the annual claimants on the funds of the Society exceed the number of deaths recorded in the Table, the Society will in that case be unable to support its various engagements. But if, on the other hand, the actual claims fall short of the number provided for by the Table, the Society will be in the same degree prosperous, and enabled to make a return in the shape of bonus to its surviving members.

Supposing the number of annual deaths in a Society consisting of any given number of persons, at any common age to be ascertained, or what is the same thing, suppose any table of mortality to be assumed as the probable standard by which the Assurers in such a Society will live and die, it will then be very easy to determine what sum in present money would serve to provide a given payment (say 100*l.*) upon the death of every member, and such ascertained amount, divided into as many equal shares as there are members, will be the present value, at that age, of a reversion or assurance of 100*l.*† Let now the Northampton Table be assumed as the probable standard of mortality, and ninety as the common age of the forty-six members, who, entering together, constitute that class or division of the Society. It is, therefore, required to know what amount in present money ought to be demanded from these forty-six assurers, and consequently what sum ought to be the individual contribution of each.

Upon consulting the Northampton Table, it will be found that the lives of all these forty-six members will drop at different periods during the next seven years: twelve will die in the course of the first year, ten during the second, eight during the third, seven during the fourth, five during the fifth, three during the sixth, and the last remaining life will fail some time in the course of the seventh year. The Society must at starting be, therefore, provided with a sufficient fund to pay 1200*l.* at the end of the first year, 1000*l.* at the end of the second year, 800*l.* at the end of the third, and so on. Thus, in order to discharge

£.	£	£. s. d.
1200, at the end of the first year, the Society must be provided with	1200, discounted at 3 per cent., for one year	1165 1 0
1000, at the end of 2d year	1000, ditto, for 2 years	942 12 6
800, at the end of 3d year	800, ditto, for 3 years	732 2 0
700, at the end of 4th year	700, ditto, for 4 years	621 18 7
500, at the end of 5th year	500, ditto, for 5 years	531 6 0
300, at the end of 6th year	300, ditto, for 6 years	251 5 0
And in order to discharge the remaining 100 <i>l.</i> at the end of the seventh year, with 100 <i>l.</i> , discounted at 3 per cent., for seven years		81 6 2
		<b>£4225 11 0</b>

\* The reasoning here applied will be equally applicable to contributions or premiums, made at annual or other intervals. The annual premium for the purchase of an Assurance is nothing more than the single premium, or value, divided into a certain number of equal shares, and distributed over the whole period of life.

† Shorter methods of obtaining the same results by practical rules may of course be obtained, but they in a great measure owe their construction to, and depend upon abstract mathematical reasoning, which would be misplaced in the pages of a popular work like the *Saturday Magazine*.

Now, the sum of all these discounted or requisite sums being divided into forty-six equal shares, will quote nearly 91*l.* 17*s.* 2*d.* for each share, which is, in fact, the present value of a reversion of 100*l.* at the age of ninety.

The truth of the preceding operations may be readily ascertained by conceiving forty-six persons aged ninety to enter a society together, for the purpose of mutually assuring 100*l.* upon their lives. To a common fund they each contribute about 91*l.* 17*s.* 2*d.*, or in a single sum amongst them 4225*l.* 11*s.* The following sketch will exemplify the gradual operation of this fund, and its competence to provide exactly the amount assured to each individual member upon death:—

	£. s. d.
The original contribution of 4225 <i>l.</i> 11 <i>s.</i> being put out to interest, will at the end of the first year amount to	4352 5 2
From which deduct for the twelve lives which fail in the course of the year	1200 0 0
Fund remaining at the commencement of the second year	3155 5 2
Which bearing one year's interest will amount to	3246 16 8
From which deduct for the ten lives which fail in the course of the year	1000 0 0
Fund remaining at the commencement of the third year	2246 16 8
Which bearing one year's interest will amount to	2314 8 2
From which deduct for claims	800 0 0
Fund remaining at the commencement of the fourth year	1514 8 2
Which bearing one year's interest will amount to	1559 16 8
From which deduct for claims	700 0 0
Fund remaining at the commencement of the fifth year	859 16 8
Which bearing one year's interest will amount to	885 10 5
From which deduct for claims	500 0 0
Fund remaining at the commencement of the sixth year	385 10 5
Which bearing one year's interest will amount to	397 1 8
From which deduct for claims	300 0 0
Fund remaining at the commencement of the seventh year	97 1 8
Which bearing interest will amount to	100 0 0
Which will exactly discharge the last remaining claim	100 0 0

The fund which remains at the commencement of every year, if divided by the number living in the table at the age corresponding with that year, will produce in every case the value of a reversion on a single life at that age; so that if any number of new members were to be enrolled at any given age, and their contributions thrown into the amount remaining at the commencement of that year, a sufficient fund would be produced to liquidate with equal regularity and certainty the claims of both the old and the newly-entered members. Indeed, every Assurance Society which is strictly limited to the one object of granting policies for the whole duration of single lives, ought properly to consist of as many separate classes, or divisions, as there are different ages amongst the lives assured, and every person effecting an Assurance on his life, nominally enrolls himself into that particular class, or division, of the Society which corresponds with his existing age; and in like manner, every member desirous of resigning his interest in his Assurance, may, without detriment to any of the fellows of his class, withdraw his share from the common fund. This operation is a very common transaction in Life Offices, and is called surrendering a policy for its real value‡. This exact

‡ Very few offices allow the Assurer the real value of his policy; an arbitrary deduction is in general made, which constitutes what is called the official value.

classification of the lives assured is, however, seldom or ever resorted to in actual practice, although adopted as the basis of the calculations of the Society, and would, unless the Society were of any very great extent, be found both laborious and complicated, as many of the members, although co-existing at a common age, have been admitted at different periods, besides which their contributions are chiefly made at annual or other intervals.

It will be seen from a careful examination of the foregoing specimen of the operation of an Assurance fund, how much the safety of the Assurer depends upon the exactness with which the annual mortality of the Society is represented by the standard table of observations. Thoughtless and improvident speculators too often suffer themselves to be carried away by the vaunted cheapness of an office, and seldom allow themselves to consider whether the premiums charged are really equivalent to the risks incurred. Suppose, for instance, a recently-established Society were to offer to regulate its charges by the Carlisle Table, such a Society would be enabled to offer to the public premiums considerably under the charges usually made, and the unwary Assurer who enrolled himself a member, would felicitate himself upon certain supposed advantages or savings. The purchase of a Life Assurance, the benefit of which is prospective, does not, however, resemble the purchase of any other commodity. Its value wholly consists in its security, and depends upon the sufficiency of its funds to support its various engagements. A saving is not, therefore, invariably a gain; for, suppose that after a few years' experience, the mortality of that Society is found to coincide more nearly with the Northampton observations than with those from which its valuations were deduced. What remained of the original fund would be found incompetent to supply the increased demands upon it, and the surviving Assurers would to their surprise discover, that the Society was unable to discharge their claims. The younger and the more numerous the lives, the more fatal and irretrievable would be the ruin into which they would be plunged; and it is needless to say how much misery, and want of public confidence, would be occasioned by the destruction or non-fulfilment of the promises of an Assurance Society, even to a single individual.

P. H.

## THE PHILOSOPHERS' STONE.

### IV.

In a Memoir of the late Dr. Adam Clarke, published in 1833, by "A member of his Family," there is a very curious transaction recorded respecting alchemy. As it is well authenticated, and of a date much more recent than the instances quoted in our last paper, we introduce it here; remarking, however, that our sole object in doing so is, that we may be the better enabled, hereafter, to enforce and illustrate our own views on this much-disputed subject.

Dr. Clarke was distinguished both for learning and piety. As many of our readers are, doubtless, aware, he was an influential member of the body of Christians denominated Wesleyan Methodists. During his engagement in his ministerial duties at Dublin, he became acquainted with a gentleman named Hand, who had been invited, by a mutual acquaintance, to hear Dr., at that time, Mr., Clarke, preach. The subject of the discourse on the occasion referred to, was founded on Isaiah i. 25, 26; *And I will turn my hand upon thee, and purely purge away thy dross, and take away all thy tin, &c.* In explaining what he considered to be the sense of the passage, Mr. Clarke

made some observations on the general properties of metals, and especially on the modes usually employed in refining them. Mr. Hand was very much interested by these remarks, for, as it afterwards appeared, he had been for many years engaged in the study of Alchemy; trying every experiment, which the various books he could obtain on the subject, and his own active imagination, suggested. Mr. H. now sought an introduction to Mr. Clarke, and the result was, that an intimacy was established, which soon ripened into friendship; and as the alchemist possessed a good laboratory, he and Mr. C. were frequently engaged in making experiments together. Mr. Hand worked incessantly, in the hope of at length discovering the art of transmutation. He often imagined himself in possession of the mighty secret; and though as often baffled and disappointed, the prize still appeared within reach of his eager grasp.

After Mr. Clarke had left Dublin, Mr. Hand continued to correspond with him. The circumstances we are going to narrate are mentioned in letters addressed to him at Manchester, in December, 1792, and January and May, 1793. To insert the whole of the letters would occupy greater space than we can afford. We shall make such extracts from them as we think will convey an intelligible account of the most important particulars, employing as much as possible the language of the writer. To enable the reader the better to understand some of the allusions to "stained glass," it is proper to remark, that Mr. Hand had long practised that art, and with considerable success.

The first of the letters to which we have alluded, as written by Mr. Hand, is dated "Dublin, Dec. 2, 1792." He says,

On the 2nd of November last, came to my house two men; one I thought to be a priest, and yet believe so; the other a plain, sedate-looking man: they asked for me. As soon as I went to them, the last-mentioned person said he had called to see some of my stained glass; and hoped, as he was curious, I would permit him to call and see me now and then. Of course I said that I should be happy that he would do so. After much conversation, he began to speak of metals, and their properties, and of Alchemy, asking me if I had ever read any books of that kind (but I believe he well knew that I had). After some time, and many compliments passing on my ingenious art, they went away. At twelve o'clock the next forenoon, he came himself, without the priest, and told me he had a little matter that would stain glass the very colour I wanted, and which I could never get, that is, a deep blood-red. Said he, "If you have a furnace hot, we will do it, for the common fire will not do well." I replied, "Sir, I have not one hot, but if you will please to come with me, I will show you my little laboratory, and I will get one lighted." When we came out, he looked about him, and then said, "Sir, do not deceive me, you are an alchemist." "Why do you think so?" said I. "Because," he replied, "you have as many foolish vessels as I have seen with many others engaged in that study." "I have," I answered, "worked a long time at it, it is true, without gain, and I should be glad to be better instructed." "Do you believe the art?" said he. "Yes, sir." "Why?" "Because I give credit to many good and pious men." He smiled. "Will you have this air-furnace lighted?" "Yes, sir." I did so, and he then asked for a bit of glass, opened a box, and turning aside, laid a little red powder on the glass with a penknife. He then put the glass with the powder on it into the fire, and when hot, took it out, and the glass was like blood. "Have you scales?" said he. I got them for him, and some lead, of which he weighed two ounces. He then put four grains of a very white powder in a bit of wax, and when the lead was melted, put this into it, and then raised the fire for a little while,—then took it out, and cast it into water: never was finer silver in the world! I exclaimed, "O God! sir, you amaze me!" "Why," he replied, "do you call upon God? do you think He has any hand in these things?" "In all good things, sir," I said. "Did you ever see the devil?" said he. "No sir," I replied, "and I trust I never shall." "Shall I

show you something wonderful?" he inquired. "Not if it is anything of *that* kind," I said. "It is not, sir—please to get me a glass of clean water." I did so. He pulled out a bottle, and dropt a red liquor into it, and said something I did not understand. The water was all in a blaze of fire, and a multitude of little live things, like lizards, moving about in it. I was in great fear. This he perceived, took the glass, and flung it (the contents) into the ashes, and all was over. "Now, sir," said he, "if you will enter into a vow with me, as I see you are an ingenious man, I will let you know more than you will ever find out." This I declined, being fully convinced it was of the devil; and it is now I know the meaning of coming improperly by the secret. After some little time, he said he must go, and would call again, when I should think better of his offer. He left me the two ounces of *luna* (the alchemical name for *silver*), and I have never since seen nor heard from him.

The next letter, addressed by Mr. Hand to Mr. Clarke, is dated "January, 1793," and seems to have been written in reply to one from the latter gentleman, inquiring more minutely into the particulars as narrated above. Mr. Hand says

I will now proceed to give you the answers you require to your questions, first informing you, that I have never since seen nor heard anything from the individual you refer to, and secondly, that when he was with me I was not in any part deceived. I was not imposed upon in the transmutation, having used a quarter of an ounce of the silver in my own work, and sold the remainder of it for *pure silver*. \* \* I have heard too much of the tricks of Alchemists, and was too attentive to all that passed, for any man or devil to deceive me in this. The glass of water was a common tumbler, and he said something as he was putting it in, and looked very sternly at me. The blaze did not take place the moment he put the red liquid in, but little flashes in the water, and a strong smell of sulphur, so much so that I thought some had fallen into the air-furnace; but that was not the case. The glass soon became all on fire, like spirits of wine burning, and a number of little creatures became visible, exactly like lizards in England, some of them moving their heads almost to the top of the glass, and I saw them as fairly and distinctly as I ever saw anything in my life.

In the last letter relating to this curious affair, and which is dated "Dublin, May 13, 1793," Mr. Hand says,

Since I wrote to you last, I met the man who was at my house, and who made the transmutation, and did the other matter. I said, "How do you do, Sir?" He replied, "Sir, I have not the honour of knowing you." "Do you not remember," said I, "the person who stains glass, and to whom you were so kind as to show some experiments?" "No, sir," said he, "you are mistaken," and he turned red in the face. "Sir," I answered, "if I am mistaken, I beg your pardon for telling you that I was never right in anything in my life, and never shall be." "Sir," he replied, "you are mistaken, and I wish you good morning." He several times turned round to look after me, but be assured I never saw a man, if that was not the one who was with me. I do intend to inquire and find him, or who he is; of this I am determined.

We are informed by Dr. Clarke's biographer, that Mr. Hand was a gentleman of character, and one who would not on any account misrepresent any fact. He continued to correspond with Dr. Clarke during the years he remained in Dublin; and on his subsequent removal to London, maintained his intimacy with him and his family till his death.

THE most exalted reputation is that which arises from the dispensation of happiness to our fellow-creatures.—PENN.

It is a happy instinct which enables us to value these little prizes so highly, and a curious thing to reflect, as we stumble through the parks, knee deep in children, that there is not one little unit in those diminutive millions that has not (God bless it!) a circle of admiring relatives, to whom it is the prettiest, the dearest, the cleverest, in fact, the only child that was ever worth a thought.—*Woman's Thoughts.*

## ADAPTATION OF EXTERNAL NATURE TO THE CONDITION OF MAN.

WHEN Hamlet, in contemplating the grandeur of creation, breaks forth into that sublime apostrophe on man,—*"How noble in reason! how infinite in faculties! in form and moving, how express and admirable! in action, how like an angel! in apprehension, how like a god! the beauty of the world! the paragon of animals!"* who does not feel elated by the description? who does not feel conscious of its truth?

Nor is its truth the less admissible, because the poet, in concentrating the powers of his imagination on the excellences of that work of creation which bears the stamp of the Creator's image, has omitted to present to our view the reverse of the impression, the frailty, namely, of our fallen nature; for although, on moral and religious consideration, each individual is bound habitually to take the one view in conjunction with the other; in a simply philosophical contemplation of human nature, we are not precluded by any reasonable barrier, from taking such a partial view of the subject as the occasion may suggest.

In the present instance, I propose to consider, not the moral, but the *physical condition of man*; and to examine how far the *state of external nature is adapted* to that condition; whether we regard the provisions made for the *supply of man's wants, either natural or acquired*; or those which are made for the *exercise of his intellectual faculties*.

But a wide field here opens to our view; for man cannot, under any circumstances, be considered as an insulated being, or unconnected with the rest of animated nature. He is, indeed, but one link in the great chain of animal creation; and not only does the contemplation of his condition lose half its interest, if separated from the contemplation of the condition of other animals, but it cannot be satisfactorily investigated without that aid. And, again, animal life itself is but one among many modes of existence, by which the Creator has manifested his omnipotence, and which it is necessary to contemplate, in connexion with the general phenomena of nature, in order to show the superiority of that province, at the head of which human beings have been placed.

In attempting, however, to form a just estimate of the physical condition of man, we must not regard him merely under the aspect of savage or uncivilized life, and consider this as his natural state; for it may be presumed that, at the present day, such a puerile view of the question is not for a moment entertained by any one capable of philosophical reflection. In fact, in as many different states as man does actually exist, civilized or savage, so many are his natural states.

The more familiar objects of that external world by which man is surrounded are usually distributed into three kingdoms, as they are called,—the *animal, vegetable, and mineral*; but for our present purpose it will be necessary to take into our account the phenomena of the *atmosphere* also.

The *atmosphere* principally consists of the *air* which we respire, (a form of matter so subtile, in all its states, as to be invisible,) together with a variable proportion of *water*, of which a part is always retained in close combination with the air, and, like the air itself, exists always in an invisible state. There are also diffused through the atmosphere those still more subtile agents, *heat and electricity*. But all these, though of so subtile a substance, are in their occasional effects the most powerful agents of nature. For, omitting the consideration of their silent but wonderful operation, as exhibited in the process of vegetation, and in many other processes less open to observation, let us consider the occasional effects of



air in the violence of a tornado; or of water, in the inundation of a rapid river; or let us contemplate the effect of either an indefinite diminution or increase of heat. On the one hand, the natural process of animal decomposition arrested by its abstraction, so that the imbedded mammoth remains at this moment in the same state that it was four thousand years ago, and in which, under the same circumstances, it undoubtedly would be four thousand or four millions years hence; on the other hand, the possibility of the dissipation of all the constituent parts of matter, or their fixation in the state of glass, resulting from the agency of indefinitely increased heat; or, lastly, let us consider the tremendous effects of condensed electricity in the form of lightning,—and we shall necessarily acknowledge that, though in their usual state the constituents of the atmosphere are among the most tranquil agents of nature, yet, when their power is concentrated, they are the most awfully energetic.

In the *mineral kingdom* the most characteristic property of the several species, appears to be a disposition to a peculiar mode of mutual attraction among the particles composing the individuals belonging to them; from which attraction, when exerted under the most favourable circumstances, result that symmetry and regularity of form, to which the term *crystal* has been applied. The transparency and degree of hardness of crystals are various, and depend much upon external circumstances. The form is fundamentally the same for each species, though capable of being modified according to known laws, and the substance is chemically the same throughout its whole extent. Every atom of a crystallized mass of gypsum consists of water, lime, and sulphuric acid, united in the same proportions as are found to exist in the whole mass, or in any given part of it.

The individuals of the *vegetable kingdom* differ very remarkably from those of the mineral, both in form and substance. In their form we see nothing like the mathematical precision of crystallization; and in their substance they differ widely, according to the part of the vegetable which is examined; so that, independently of previous knowledge of the species, we could hardly discover any natural relation between the several constituent parts of the individual. What is there in the insulated leaf of a rose or of a peach tree, that would lead us to expect the fruit of the one or the flower of the other? But the most remarkable line of distinction between vegetables, and the individuals of the preceding kingdom, consists in their mode of increase and reproduction. Minerals can only increase, as such, by apposition of particles specifically similar to themselves, and can only be originally produced by the immediate combination of their constituent elements. But vegetables have an apparatus within them, by means of which they can assimilate the heterogeneous particles of the surrounding soil to their own nature; and they have also the power of producing individuals specifically the same as themselves; in common language, they are capable of contributing to their own growth, and to the continuation of their species. And as they produce these effects by means of internal organs adapted to the purpose, they are hence denominated organized bodies.

The individuals of the *animal kingdom* very closely resemble those of the vegetable in the two properties just described. The respective organs differ, as we might expect, in their form and position; but in their functions, or mode of action, there is a strong analogy, and even similarity, throughout. But animals differ from vegetables more remarkably than these do from every unorganized form of matter, in being endued

with sensation and volition; properties which extend the sphere of their relations to such a degree, as to raise them immeasurably above all other forms of matter in the scale of existence.

In distributing the individuals of the material world among these four kingdoms of nature, there occasionally prevails considerable obscurity, not only with respect to the true place which an individual ought to occupy in the scale of a particular kingdom, but even with respect to the question, under which of the four kingdoms it ought to be arranged; this obscurity arising, of course, from the points of resemblance apparently balancing, or more than balancing, the points of difference. Let us, for instance, in the atmospherical kingdom, take a fragment of a perfectly transparent crystal of pure ice, and under ordinary circumstances it would be difficult, either by the sight or the touch, to distinguish it from a fragment of transparent quartz, or rock-crystal; indeed, the transfer of the original term *krystallos*, from the one to the other, shows the close resemblance of the two. Some minerals, again, so nearly resemble vegetables in form, as to have given rise to specific terms of appellation, derived from the vegetable kingdom; as *flos ferri*, *mineral agaric*, &c. And, lastly, many of the animals called sea-anemones so far resemble the flower called by the same name, that their real character is at first very doubtful. But, omitting these rare and equivocal instances, we may safely affirm that, of all the kingdoms of nature, the individuals of the animal kingdom have the most extensive and important relations to the surrounding universe. And if among the kingdoms of nature animals hold the first rank, in consequence of the importance of these relations, among animals themselves the first rank must be assigned to MAN.

[Abridged from KIDD'S *Bridgewater Treatise*.]

#### VANITY OF WORLDLY THINGS.

WHERE are now the famed potentates whose power extended over almost the whole earth? Who is it that has made them descend from their lofty height, and despoiled them of all their treasures? Whither are gone those vaunted heroes, whose achievements drew forth such expressions of admiration; those learned prodigies of acquirement, whose writings are spread to the remotest corner of the globe; those sublime orators, who decided the decrees of senates at their pleasure? Ask where are the proud, the rich, the voluptuous, the young? where those haughty nobles, those hard masters, who so rigorously required such implicit obedience? Ask the earth,—she will show you the places where they lie. Interrogate the tomb,—it will tell you the narrow space in which their bodies are compressed; their bodies? do they then still exist? Perhaps a handful of dust may remain of each.

But whilst all around us thus passes away, whilst everything escapes us, the kingdom which shall not pass away, draws nigh. So many revolutions, such a continual flux and reflux of human things, this perpetually changing scene of a fleeting world, all point to the end towards which we are hastening our steps. It is the voice of the Bridegroom who calls us to the marriage-feast, and by his reiterated warnings, urges us to walk accordingly. You, who are deaf to this voice, who remain buried in the mire of earthly things, go down yet lower, and what will you find? —the grave which is waiting for you, and into which you must descend, whether you will or not. Already Death stands at your side, ready to fling upon you, and drag you into it, as he has done with those who have preceded you. —ST. EPHRAIM—*Book of the Fathers*.

IDLENESS is the great corrupter of youth, and the bane and dishonour of middle age. He who, in the prime of life, finds time to hang heavy on his hands, may, with much reason, suspect that he has not consulted the duties which the consideration of his age imposed on him; assuredly he has not consulted his happiness. —BLAIR.

## NOTES ON FOREST TREES. No. XX.

THE HOLLY, (*Ilex aquifolium*.)

THE Holly has been by many considered to be merely a shrub, but when left to its natural growth, it attains the height of at least thirty feet; it is chiefly employed, even at present, in the formation of hedges, but it was an especial favourite among our forefathers for the same purpose. Old Evelyn's description affords a good idea of the favour in which it was held.

Above all the natural greens which enrich our home-born store, there is none certainly to be compared to the Holly; insomuch that I have often wondered at our curiosity after foreign plants, and expensive difficulties, to the neglect of the culture of this vulgar but incomparable tree, whether we will propagate it for use or defence, or for sight and ornament. Is there under heaven a more glorious and refreshing object of the kind than an impregnable hedge, of one hundred and sixty feet in length, seven feet high, and five in diameter, which I can show in my poor gardens at any time of the year, glittering with its armed and varnished leaves? The latter standards at orderly distance, blushing with their natural coral. It mocks at the rudest assaults of the weather, beasts, or hedge-breakers.

The wood of the Holly is extremely hard and tough; it is of much value to the inlayer, for ornamental work, and is used in making the best description of blocks for the engraving of patterns for printed calico or paper-hanging.

The greatest collection of natural Hollies is said to have been in the fir-forest of Black Hall, on the river Dee, about twenty miles above Aberdeen; many of them were very large and well stemmed; the greater part were cut down, and the wood fetched as much as five shillings and sixpence a foot in the London market.

The Holly forms a prominent object among the evergreens with which our houses and churches are decorated at Christmas, its scarlet berries contrasting so beautifully with the dark green of its spiny leaves. There is a variety of this tree, with varie-

gated leaves, which is much cultivated for its beauty. In addition to the value of its timber, the leaves and bark of the Holly were in great request a few years since, for the manufacture of bird-lime, an article



LEAVES, BLOSSOM, AND BERRIES OF THE HOLLY.

much less used now than formerly. The bird-lime was prepared by allowing these parts of the tree to soak in water until they assumed a kind of pulpy nature, they were then submitted to the action of a gentle heat, until the mass became adhesive, and could be drawn out in strings.

## TO AN INFANT.

SWEET infant, when I gaze on thee,  
And mark thy spirit's bounding lightness  
Thy laugh of playful ecstasy,  
Thy glance of animated brightness,  
How beautiful the light appears  
Of Reason in her first revealings,  
How blest the boon of opening years,  
Unclouded hopes, unwithered feelings!

Thou hast not felt Ambition's thrall,  
Thou dost not sigh for absent treasures,  
Thy dark eye beams in joy on all,  
Simple and artless are thy pleasures;  
And should a tear obscure thy bliss,  
I know the spell to soothe thy sadness,  
The magic of thy father's kiss  
Can soon transform thy grief to gladness!

The world, my fair and frolic boy,  
May give thy feelings new directions,  
But may its changes ne'er destroy  
The fervour of thy warm affections!  
Still may thy glad contented eyes  
Smile on each object they are meeting,  
Yet, most of earthly blessings, prize  
A parent's look—a parent's greeting!

And, oh! may He whose boundless love  
Excels the ken of human blindness,  
The wisest father's care above—  
Beyond the fondest mother's kindness—  
Teach thy young heart for Him to glow,  
Thy ways from sin and sorrow sever,  
And guide thy steps in peace below,  
To realms where peace endures for ever!—M. A

BE favourable unto the poor, which may be little; if thou wilt be aided of God against them that be mighty.—SIR THOMAS SMITH.

GUILT may attain temporal splendour, but can never confer real happiness.—?

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